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> O <
OI IO IntelliGenetics
> O <

Quest - Quick User-directed Expression Search Tool
Release 5.4

-- Outline of search "seq17ags" --

Selected search type is key against sequence data banks or files.
Selected scope is Sequence.
Selected sequence key from "kam872.key":
seq17 (AA) ID: seq17 AA preliminary pattern
1 followed by
2 r
2 f or y or w or a or l or i or v
2 wc
2 k or r or h
2 k or r or h or f or y or w
2 k or r or h
2 cygfc
2 k or r or h
2 k or r or h or f or y or w
2 f or y or w or a or l or i or v
2 cr

Selected files:
File : kam872.pep

-- Output Parameters --

Format Options:
Nucleic acid code matching Exact Indirect file
Find non-matching hits only No Sequence or key file
Report key used Yes List of hits
Note position of hit Yes Hit display
Display full annotations Yes Name and annotations
Sequence context 50

-- Run Parameters --

Run mode Batch
Time to start comparison now
Notify at end of run No

-----
1 match found in sequence:
aael9477 ; Limulus polyphemus polyphephemusin-like peptide #8.
(from "kam872.pep")
TOIG of: aael9477 check: 3126 from: 1 to: 18

ID AAE19477 standard; peptide; 18 AA.
XX
AC AAE19477;
XX
DT 31-MAY-2002 (first entry)
XX
DE Limulus polyphemus polyphephemusin-like peptide #8.
XX
KW Polyphephemusin-like peptide; antimicrobial; sepsis-associated disorder;
human immunodeficiency virus 1; HIV-1; endotoxaemia; septic shock;
KW preservative; sterilant; food additive; topical agent.
XX
OS Limulus polyphemus.
XX
FH Key Location/Qualifiers
FT Modified-site 18
FT /note= "Amidated"
XX
PN WO200200687-A2.
XX
```

```
PD 03-JAN-2002.
XX
PF 27-JUN-2001; 2001WO-CA00918.
XX
XX 27-JUN-2000; 2000US-0604864.
XX
XX (UYBR-) UNIV BRITISH COLUMBIA.
XX
XX Hancock RW, Zhang L;
XX
XX WPI; 2002-226915/28.
XX
XX Novel isolated cationic, polyphephemusin-like peptide having two
PT anti-parallel beta strands stabilized by two disulfide bonds, beta
PT hairpin loop and antimicrobial activity useful to inhibit bacterial,
PT yeast, viral growth -
XX
XX Claim 3; Page 35; 57pp; English.
XX
XX The invention relates to cationic, polyphephemusin-like peptides having
CC antimicrobial activity. These cationic peptides have two anti-parallel
CC beta strands stabilised by two or more disulfide bonds and a beta
CC hairpin loop. Peptides of the invention are useful for inhibiting the
CC growth of microbes such as gram positive (e.g., Staphylococcus aureus,
CC Staphylococcus epidermidis, or Enterococcus faecalis) or gram negative
CC (e.g., Escherichia coli, Pseudomonas aeruginosa, or Salmonella
CC typhimurium) bacteria; fungi such as Candida albicans; envelope viruses
CC such as human immunodeficiency virus (HIV)-1 vesicular stomatitis
CC virus, Influenza A virus, Herpes virus, Hepatitis B virus, or Hepatitis
CC C virus. Polyphephemusin-like peptides are also used to inhibit endotoxaemia
CC or sepsis-associated disorder (e.g., septic shock), as preservatives or
CC sterilants of materials susceptible to microbial or viral contamination,
CC as broad spectrum antimicrobial agent directed towards various
CC applications including the use of peptides as preservatives in processed
CC foods either alone or in combination with antibacterial food additives
CC such as lysozymes; as a topical agent (pseudomonas, Streptococcus and
CC to kill odour producing microbes (Micrococi). The present sequence is
CC Limulus polyphephemusin-like peptide.
XX
XX Sequence 18 AA;
SQ

AAE19477 Length: 18 August 28, 2003 07:00 Type: P Check: 3126
Found using 'seq17' (kam872.key)

1 RYWCRRRCYRGFCRYFCR 18
1 -----1
1

-----
1 match found in sequence:
aael9478 ; Limulus polyphemus polyphephemusin-like peptide #9.
(from "kam872.pep")
TOIG of: aael9478 check: 3063 from: 1 to: 18

ID AAE19478 standard; peptide; 18 AA.
XX
AC AAE19478;
XX
DT 31-MAY-2002 (first entry)
XX
DE Limulus polyphemus polyphephemusin-like peptide #9.
XX
KW Polyphephemusin-like peptide; antimicrobial; sepsis-associated disorder;
human immunodeficiency virus 1; HIV-1; endotoxaemia; septic shock;
KW preservative; sterilant; food additive; topical agent.
XX
OS Limulus polyphemus.
XX
FH Key Location/Qualifiers
FT Modified-site 18
FT /note= "Amidated"
XX
PN WO200200687-A2.
XX
```

XX 03-JAN-2002.
PD
XX
XX 27-JUN-2001; 2001WO-CA00918.
PF
XX
XX 27-JUN-2000; 2000US-0604864.
PR
XX
XX (UYBR-) UNIV BRITISH COLUMBIA.
PA
XX
XX Hancock REW, Zhang L;
PI
XX
XX WPI; 2002-226915/28.
DR
XX
XX Novel isolated cationic, polypheumus-like peptide having two
PT anti-parallel beta strands stabilized by two disulfide bonds, beta
PT hairpin loop and antimicrobial activity useful to inhibit bacterial,
PT yeast, viral growth -
XX
XX Claim 3; Page 35; 57pp; English.
PS
XX
XX The invention relates to cationic, polypheumus-like peptides having
CC antimicrobial activity. These cationic peptides have two anti-parallel
CC beta strands stabilised by two or more disulfide bonds and a beta
CC hairpin loop. Peptides of the invention are useful for inhibiting the
CC growth of microbes such as gram positive (e.g., Staphylococcus aureus,
CC Staphylococcus epidermidis, or Enterococcus faecalis) or gram negative
CC (e.g., Escherichia coli, Pseudomonas aeruginosa, or Salmonella
CC typhimurium) bacteria; fungi such as Candida albicans; envelope viruses
CC such as human immunodeficiency virus (HIV)-1, vesicular stomatitis
CC virus, influenza A virus, herpes virus, hepatitis B virus, or hepatitis
CC C virus. Polypheumus-like peptides are also used to inhibit endotoxaemia
CC or sepsis-associated disorder (e.g., septic shock), as preservatives or
CC sterilants of materials susceptible to microbial or viral contamination,
CC as broad spectrum antimicrobial agent directed towards various
CC applications including the use of peptides as preservatives in processed
CC foods either alone or in combination with antibacterial food additives
CC such as lysozymes; as a topical agent (Pseudomonas, Streptococcus and
CC to kill odour producing microbes (Micrococci). The present sequence is
CC Limulus polypheumus polypheumus-like peptide.
XX
SQ Sequence 18 AA;

AAE19478 Length: 18 August 28, 2003 07:00 Type: P Check: 3063 ..
Found using 'seq17' (kam872.key)

1 |-----|
RWGCRKCYRGFCRFR 18
1

-- Search Statistics --

Times:	CPU	Total Elapsed
	00:00:00.00	00:00:00.00

Number of sequences searched:	11
Number of sequence hits:	2
Number of separate matches:	2
Number of sequence hits saved:	0

```
! FINDPATTERNS on PIR:* allowing 0 mismatches
!      1 WCF(F,Y,W,A,L,I,V)VC(K,R,H,F,Y,W)RG(K,R,H)CR(K,R,H,F,Y,W)KCRR

Databases searched:
  NBRF, Release 76.1, Released on 12May2003, Formatted on 10Jun2003

  Total finds:      0
  Total length:    96,168,682
  Total sequences: 283,308
  CPU time:       02:27.89
```

```
! FINDPATTERNS on Swiss-Prot: * allowing 0 mismatches
!      1 WCF(F,Y,W,A,L,I,V)VC(K,R,H,F,Y,W)RG(K,R,H)CR(K,R,H,F,Y,W)KCRR
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Databases searched:
  SWISS-PROT, Release 41.1, Released on 6Jun2003, Formatted on 9Jun2003

Total finds:      0
Total length:    47,026,705
Total sequences: 127,863
CPU time:       01:14.46
```

! FINDPATTERNS on sptrembl:* allowing 0 mismatches

! 1 WCF(F,Y,W,A,L,I,V)VC(K,R,H,E,Y,W)RG(K,R,H)CR(K,R,H,F,Y,W)KCRR

Databases searched:

SPTREMBL, Release 23.0, Released on 4Mar2003, Formatted on 7Mar2003

Total finds: 0

Total length: 258,052,604

Total sequences: 830,525

CPU time: 07:07.89

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O I 10 Intelligenetics
> O <

Quest - Quick User-directed Expression Search Tool
Release 5.4

-- Outline of search "seq16ags" --

Selected search type is key against sequence data banks or files.
Selected scope is Sequence. "kam872.key":
Selected sequence key from "kam872.key":
seq16 (AA) ID seq16 AA preliminary pattern
1 followed by
2 irwcf
2 f or y or w or a or l or i or v
2 vc
2 k or r or h
2 rg
2 r or v or a
2 cy
2 r or v or a
2 r or v or a
2 cr

Selected files:
File : kam872.pep

-- Output Parameters --

Format Options:      File Options:
Nucleic acid code matching      Exact      Indirect file
Find non-matching hits only      No      Sequence or key file
Report key used                  Yes      List of hits
Note position of hit             Yes      Hit display
Display full annotations         Yes      Name and annotations
Sequence context                  50

Run mode              Batch
Time to start comparison now
Notify at end of run  No

-- Run Parameters --

-----
1 match found in sequence:
aae19475 ; Limulus polyphemus polyphemusin-like peptide #6.
(from "kam872.pep")
TOIG of: aae19475 check: 3094 from: 1 to: 18

ID   AAE19475 standard; peptide; 18 AA.
XX
AC   AAE19475;
XX
DT   31-MAY-2002 (first entry)
XX
DE   Limulus polyphemus polyphemusin-like peptide #6.
XX
KW   Polyphemusin-like peptide; antimicrobial; sepsis-associated disorder;
KW   human immunodeficiency virus 1; HIV-1; endotoxaemia; septic shock;
KW   preservative; sterilant; food additive; topical agent.
XX
OS   Limulus polyphemus.
XX
FH   Key Location/Qualifiers
FT   Modified-site 18 /note= "Amidated"
XX
PN   WO200200687-A2.
XX
PD   03-JAN-2002.

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XX 27-JUN-2001; 2001WO-CR00918.
XX
XX 27-JUN-2000; 2000US-0604864.
XX
XX (UYBR-) UNIV BRITISH COLUMBIA.
XX
XX Hancock REW, Zhang L;
XX
XX WPI; 2002-226915/28.
XX
XX Novel isolated cationic, polyphemusin-like peptide having two
XX anti-parallel beta strands stabilized by two disulfide bonds, beta
XX hairpin loop and antimicrobial activity useful to inhibit bacterial,
XX yeast, viral growth
XX
XX Claim 3; Page 35; 57pp; English.
XX
XX The invention relates to cationic, polyphemusin-like peptides having
XX antimicrobial activity. These cationic peptides have two anti-parallel
XX beta strands stabilised by two or more disulfide bonds and a beta
XX hairpin loop. Peptides of the invention are useful for inhibiting the
XX growth of microbes such as gram positive (e.g., Staphylococcus aureus,
XX Staphylococcus epidermidis, or Enterococcus faecalis) or gram negative
XX (e.g., Escherichia coli, Pseudomonas aeruginosa, or Salmonella
XX typhimurium) bacteria; fungi such as Candida albicans; envelope viruses
XX such as human immunodeficiency virus (HIV)-1, vesicular stomatitis
XX virus, influenza A virus, herpes virus, hepatitis B virus, or hepatitis
XX C virus. Polyphemusin-like peptides are also used to inhibit endotoxaemia
XX or sepsis-associated disorder (e.g., septic shock), as preservatives or
XX sterilants of materials susceptible to microbial or viral contamination,
XX as broad spectrum antimicrobial agent directed towards various
XX applications including the use of peptides as preservatives in processed
XX foods either alone or in combination with antibacterial food additives
XX such as lysozymes; as a topical agent (Pseudomonas, Streptococcus and
XX to kill odour producing microbes (Micrococci). The present sequence is
XX Limulus polyphemus polyphemusin-like peptide.
XX
XX Sequence 18 AA;
SQ

AAE19475 Length: 18 August 28, 2003 06:59 Type: P Check: 3094 ..
Found using 'seq16' (kam872.key)

1 -----1
1 RWCFTVCRRGACYRRCR 18

-----
1 match found in sequence:
aae19476 ; Limulus polyphemus polyphemusin-like peptide #7.
(from "kam872.pep")
TOIG of: aae19476 check: 4644 from: 1 to: 19

ID   AAE19476 standard; peptide; 19 AA.
XX
AC   AAE19476;
XX
DT   31-MAY-2002 (first entry)
XX
DE   Limulus polyphemus polyphemusin-like peptide #7.
XX
KW   Polyphemusin-like peptide; antimicrobial; sepsis-associated disorder;
KW   human immunodeficiency virus 1; HIV-1; endotoxaemia; septic shock;
KW   preservative; sterilant; food additive; topical agent.
XX
OS   Limulus polyphemus.
XX
FH   Key Location/Qualifiers
FT   Modified-site 19 /note= "Amidated"
XX
PN   WO200200687-A2.
XX
PD

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PD 03-JAN-2002.
XX
XX
PF 27-JUN-2001; 2001WO-CA00918.
XX
XX
PR 27-JUN-2000; 2000US-0604864.
XX
XX
PA (UYER-) UNIV BRITISH COLUMBIA.
XX
XX Hancock REW, Zhang L;
XX
XX WPI; 2002-226915/28.
XX
XX Novel isolated cationic, polyphemusin-like peptide having two
PT anti-parallel beta strands stabilized by two disulfide bonds, beta
PT hairpin loop and antimicrobial activity useful to inhibit bacterial,
PT yeast, viral growth
XX
XX
PS Claim 3; Page 35; 57pp; English.
XX
XX The invention relates to cationic, polyphemusin-like peptides having
CC antimicrobial activity. These cationic peptides have two anti-parallel
CC beta strands stabilised by two or more disulfide bonds and a beta
CC hairpin loop. Peptides of the invention are useful for inhibiting the
CC growth of microbes such as gram positive (e.g., Staphylococcus aureus,
CC Staphylococcus epidermidis, or Enterococcus faecalis) or gram negative
CC (e.g., Escherichia coli, Pseudomonas aeruginosa, or Salmonella
CC typhimurium) bacteria; fungi such as Candida albicans; envelope viruses
CC such as human immunodeficiency virus (HIV)-1, vesicular stomatitis
CC virus, influenza A virus, herpes virus, hepatitis B virus, or hepatitis
CC C virus. Polyphemusin-like peptides are also used to inhibit endotoxaemia
CC or sepsis-associated disorder (e.g., septic shock), as preservatives or
CC sterilants of materials susceptible to microbial or viral contamination,
CC as broad spectrum antimicrobial agent directed towards various
CC applications including the use of peptides as preservatives in processed
CC foods either alone or in combination with antibacterial food additives
CC such as lysozymes; as a topical agent (Pseudomonas, Streptococcus and
CC to kill odour producing microbes (Micrococi). The present sequence is
CC Limulus polyphemus polyphemusin-like peptide.
XX
SQ Sequence 19 AA;

AAE19476 Length: 19 August 28, 2003 07:00 Type: P Check: 4644 ..
Found using 'seq16' (kam872.key)

1 |-----|
1 RWCFTVCGRGCVACKR 18

-- Search Statistics --

Times: CPU Total Elapsed
00:00:00.00 00:00:00.00

Number of sequences searched: 11
Number of sequence hits: 2
Number of separate matches: 2
Number of sequence hits saved: 0

! FINDPATTERNS on PIR:* allowing 0 mismatches

! 1 (K,R,H,F,Y,W)RNCERVCI(K,R,H)G(K,R,H,F,Y,W)C(K,R,H)(F,Y,W,A,L,L,V)(K,R,H,F,Y,W

Databases searched:

NBRF, Release 76.1, Released on 12May2003, Formatted on 10Jun2003

Total finds: 0
Total length: 96,168,682
Total sequences: 283,308
CPU time: 05:31.47

! FINDPATTERNS on Swiss-Prot:* allowing 0 mismatches

! 1 (K,R,H,E,Y,W)RWCERVCK(K,R,H)G(K,R,H,F,Y,W)C(K,R,H)(F,Y,W,A,L,I,V)(K,R,H,E,Y,W

Databases searched:

SWISS-PROT, Release 41.1., Released on 6Jun2003, Formatted on 9Jun2003

Total finds:	0
Total length:	47,026,705
Total sequences:	127,863
CPU time:	02:43.51

! FINDPATTERNS on sptrembl:* allowing 0 mismatches

! 1 (K,R,H,F,Y,W)RWCRCVCY(K,R,H)G(K,R,H,F,Y,W)C(K,R,H)(F,Y,W,A,L,I,V)(K,R,H,F,Y,W)

Databases searched:

SPTREMBL, Release 23.0, Released on 4Mar2003, Formatted on 7Mar2003

Total finds: 0
Total length: 258,052,604
Total sequences: 830,525
CPU time: 15:20.39

> 0 <
O| IO IntelliGenetics
> 0 <

Quest - Quick User-directed Expression Search Tool
Release 5.4

-- Outline of search "seq15ags" --

Selected search type is key against sequence data banks or files.

Selected scope is Sequence.

Selected sequence key from "kam872.key".

seq15 (AA) ID seq15 AA preliminary pattern

1 followed by
2 k or r or h or f or y or w
2 k or r or h
2 k or r or h
2 g
2 k or r or h or f or y or w
2 c
2 k or r or h
2 f or y or w or a or l or i or v
2 k or r or h or f or y or w
2 cr

Selected files:

File : kam872.pep

-- Output Parameters --

Format Options: File Options:
Nucleic acid code matching Exact Indirect file
Find non-matching hits only No Sequence or key file
Report key used Yes List of hits
Note position of hit Yes Hit display
Display full annotations Yes Name and annotations
Sequence context 50

-- Run Parameters --

Run mode Batch
Time to start comparison now
Notify at end of run No

1 match found in sequence:
aae19472 ; Limulus polyphemus polypeptidase-like peptide #3.
(from "kam872.pep")

TOIG of: aae19472 check: 3228 from: 1 to: 18

ID AAE19472 standard; peptide; 18 AA.

XX AC AAE19472;

XX DT 31-MAY-2002 (first entry)

XX DE Limulus polyphemus polypeptidase-like peptide #3.

XX KW Polypeptidase-like peptide; antimicrobial; sepsis-associated disorder;
KW human immunodeficiency virus 1; HIV-1; endotoxaemia; septic shock;
KW preservative; sterilant; food additive; topical agent.

XX OS Limulus polyphemus.

XX Key Location/Qualifiers

XX FT Disulfide-bond 4..17

XX FT Disulfide-bond 8..13

XX FT Modified-site 18

XX FT /note= "Amidated"

XX PN WO200200687-A2.

XX PD 03-JAN-2002.
XX PF 27-JUN-2001; 2001WO-CA00918.
XX PR 27-JUN-2000; 2000US-0604864.
XX PA (UYBR-) UNIV BRITISH COLUMBIA.

XX PI Hancock REW, Zhang L;

XX DR WPI; 2002-226915/28.

XX PT Novel isolated cationic, polypeptidase-like peptide having two
PT anti-parallel beta strands stabilized by two disulfide bonds, beta
PT hairpin loop and antimicrobial activity useful to inhibit bacterial,
PT yeast, viral growth -

XX PS Claim 3; Page 35; 57pp; English.

XX CC The invention relates to cationic, polypeptidase-like peptides having
CC antimicrobial activity. These cationic peptides have two anti-parallel
CC beta strands stabilised by two or more disulfide bonds and a beta
CC hairpin loop. Peptides of the invention are useful for inhibiting the
CC growth of microbes such as gram positive (e.g., Staphylococcus aureus,
CC Staphylococcus epidermidis, or Enterococcus faecalis) or gram negative
CC (e.g., Escherichia coli, Pseudomonas aeruginosa, or Salmonella
CC typhimurium) bacteria; fungi such as Candida albicans; envelope viruses
CC such as human immunodeficiency virus (HIV)-1, vesicular stomatitis
CC virus, influenza A virus, herpes virus, hepatitis B virus, or hepatitis
CC C virus. Polypeptidase-like peptides are also used to inhibit endotoxaemia
CC or sepsis-associated disorder (e.g., septic shock), as preservatives or
CC sterilants of materials susceptible to microbial or viral contamination,
CC as broad spectrum antimicrobial agent directed towards various
CC applications including the use of peptides as preservatives in processed
CC foods either alone or in combination with antibacterial food additives
CC such as lysozymes; as a topical agent (Pseudomonas, Streptococcus and
CC to kill odour producing microbes (Micrococci). The present sequence is
CC Limulus polyphemus polypeptidase-like peptide.

XX SQ Sequence 18 AA;

AAE19472 Length: 18 August 28, 2003 06:59 Type: P Check: 3228
Found using 'seq15' (kam872.key)

1 |-----|
1 |FWCFVVCYKGRYKCR|
18

1 match found in sequence:
aae19473 ; Limulus polyphemus polypeptidase-like peptide #4.
(from "kam872.pep")

TOIG of: aae19473 check: 3096 from: 1 to: 18

ID AAE19473 standard; peptide; 18 AA.

XX AC AAE19473;

XX DT 31-MAY-2002 (first entry)

XX DE Limulus polyphemus polypeptidase-like peptide #4.

XX KW Polypeptidase-like peptide; antimicrobial; sepsis-associated disorder;
KW human immunodeficiency virus 1; HIV-1; endotoxaemia; septic shock;
KW preservative; sterilant; food additive; topical agent.

XX OS Limulus polyphemus.

XX Key Location/Qualifiers

XX FT Disulfide-bond 4..17

XX FT Disulfide-bond 8..13

XX FT Modified-site 18

! FINDPATTERNS on PIR:* allowing 0 mismatches

! 1 RRCWF(F,Y,W/A,L,I,V)VC(K,R,H)RG(R,V,A)CY(R,V,A)(R,V,A)CR

Databases searched:

NRFF, Release 76.1, Released on 12May2003, Formatted on 10Jun2003

Total finds: 0

Total length: 96,168,682

Total sequences: 283,308

CPU time: 02:31.79

! FINDPATTERNS on Swiss-Prot:* allowing 0 mismatches

! 1 RRWCF(F,Y,W,A,L,I,V)VC(K,R,H)RG(R,V,A)CY(R,V,A)(R,V,A)CR

Databases searched:

SWISS-PROT, Release 41.1, Released on 6Jun2003, Formatted on 9Jun2003

Total finds:	0
Total length:	47,026,705
Total sequences:	127,863
CPU time:	01:14.99

! FINDPATTERNS on sptrembl:* allowing 0 mismatches

! 1 RWCF(F,Y,W,A,L,I,V)VC(K,R,H)RG(R,V,A)CY(R,V,A)(R,V,A)CR

Databases searched:

SPTREMBL, Release 23.0, Released on 4Mar2003, Formatted on 7Mar2003

Total finds: 0

Total length: 258,052,604

Total sequences: 830,525

CPU time: 07:14.40

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> O <
OI IO IntelliGenetics
> O <

Quest - Quick User-directed Expression Search Tool
Release 5.4

-- Outline of search "seq14ags" --

Selected search type is key against sequence data banks or files.
Selected scope is Sequence.
Selected sequence key from "kam872.key":
seq14 (AA) ID seq14 AA preliminary pattern
1 followed by
2 wcf
2 f or y or w or a or l or i or v
2 vc
2 k or r or h or f or y or w
2 rg
2 k or r or h
2 cr
2 k or r or h or f or y or w
2 kerr
2

Selected files:
File : kam872.pep

-- Output Parameters --

Format Options:
Nucleic acid code matching Exact Indirect file
Find non-matching hits only No Sequence or key file
Report key used Yes List of hits
Note position of hit Yes Hit display
Display full annotations Yes Name and annotations
Sequence context 50

-- Run Parameters --

Run mode Batch
Time to start comparison now
Notify at end of run No

-----
1 match found in sequence:
aael19470 ; Limulus polyphemus polyphephemusin-like peptide #1.
(from "kam872.pep")
TOIG of: aael19470 check: 1851 from: 1 to: 17

ID AAE19470 standard; peptide; 17 AA.
XX AC AAE19470;
XX DT 31-MAY-2002 (first entry)
XX DE Limulus polyphemus polyphephemusin-like peptide #1.
XX KW Polyphephemusin-like peptide; antimicrobial; sepsis-associated disorder;
XX KW human immunodeficiency virus 1; HIV-1; endotoxaemia; septic shock;
XX KW preservative; sterilant; food additive; topical agent.
XX OS Limulus polyphemus.
XX FH Key Location/Qualifiers
XX FT Modified-site 17 /note= "Amidated"
XX FT
XX PN WO200200687-A2.
XX PD 03-JAN-2002.
XX

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PF 27-JUN-2001; 2001WO-CA00918.
XX
PR 27-JUN-2000; 2000US-0604864.
XX
PA (UYBR-) UNIV BRITISH COLUMBIA.
XX
PI Hancock REW, Zhang L;
XX
DR WPI; 2002-226915/28.
XX
XX Novel isolated cationic, polyphephemusin-like peptide having two
PT anti-parallel beta strands stabilized by two disulfide bonds, beta
PT hairpin loop and antimicrobial activity useful to inhibit bacterial,
PT yeast, viral growth
XX
PS Claim 3; Page 35; 57pp; English.
XX
CC The invention relates to cationic, polyphephemusin-like peptides having
CC antimicrobial activity. These cationic peptides have two anti-parallel
CC beta strands stabilised by two or more disulfide bonds and a beta
CC hairpin loop. Peptides of the invention are useful for inhibiting the
CC growth of microbes such as gram positive (e.g., Staphylococcus aureus,
CC Staphylococcus epidermidis, or Enterococcus faecalis) or gram negative
CC (e.g., Escherichia coli, Pseudomonas aeruginosa, or Salmonella
CC typhimurium) bacteria; fungi such as Candida albicans; envelope viruses
CC such as human immunodeficiency virus (HIV)-1, vesicular stomatitis
CC virus, Influenza A virus, herpes virus, hepatitis B virus, or hepatitis
CC C virus. Polyphephemusin-like peptides are also used to inhibit endotoxaemia
CC or sepsis-associated disorder (e.g., septic shock), as preservatives or
CC sterilants of materials susceptible to microbial or viral contamination,
CC as broad spectrum antimicrobial agent directed towards various
CC applications including the use of peptides as preservatives in processed
CC foods either alone or in combination with antibacterial food additives
CC such as lysozymes; as a topical agent (Pseudomonas, Streptococcus and
CC to kill odour producing microbes (Micrococci). The present sequence is
CC Limulus polyphephemusin-like peptide.
XX
SQ Sequence 17 AA;

AAE19470 Length: 17 August 28, 2003 06:58 Type: P Check: 1851 ..
Found using 'seq14' (kam872.key)

1 WCFVAVCGRCRCYKCR
1 17

-----
1 match found in sequence:
aael19471 ; Limulus polyphemus polyphephemusin-like peptide #2.
(from "kam872.pep")
TOIG of: aael19471 check: 1809 from: 1 to: 17

ID AAE19471 standard; peptide; 17 AA.
XX AC AAE19471;
XX DT 31-MAY-2002 (first entry)
XX DE Limulus polyphemus polyphephemusin-like peptide #2.
XX KW Polyphephemusin-like peptide; antimicrobial; sepsis-associated disorder;
XX KW human immunodeficiency virus 1; HIV-1; endotoxaemia; septic shock;
XX KW preservative; sterilant; food additive; topical agent.
XX OS Limulus polyphemus.
XX FH Key Location/Qualifiers
XX FT Modified-site 17 /note= "Amidated"
XX FT
XX PN WO200200687-A2.
XX PD 03-JAN-2002.
XX

```


XX 27-JUN-2001; 2001WO-CA00918.
XX
XX 27-JUN-2000; 2000US-0604864.
XX
XX (UYBR-) UNIV BRITISH COLUMBIA.
XX
XX Hancock REW, Zhang L;
XX
XX WPI; 2002-226915/28.
XX
XX Novel isolated cationic, polypheumus-like peptide having two
PT anti-parallel beta strands stabilized by two disulfide bonds, beta
PT hairpin loop and antimicrobial activity useful to inhibit bacterial,
PT yeast, viral growth
XX
XX Claim 3; Page 35; 57pp; English.
XX
XX The invention relates to cationic, polypheumus-like peptides having
CC antimicrobial activity. These cationic peptides have two anti-parallel
CC beta strands stabilised by two or more disulfide bonds and a beta
CC hairpin loop. Peptides of the invention are useful for inhibiting the
CC growth of microbes such as gram positive (e.g., Staphylococcus aureus,
CC Staphylococcus epidermidis, or Enterococcus faecalis) or gram negative
CC (e.g., Escherichia coli, Pseudomonas aeruginosa, or Salmonella
CC typhimurium) bacteria; fungi such as Candida albicans; envelope viruses
CC such as human immunodeficiency virus (HIV)-1, vesicular stomatitis
CC virus, influenza A virus, herpes virus, hepatitis B virus, or hepatitis
CC C virus. Polypheumus-like peptides are also used to inhibit endotoxaemia
CC or sepsis-associated disorder (e.g., septic shock), as preservatives or
CC sterilants of materials susceptible to microbial or viral contamination,
CC as broad spectrum antimicrobial agent directed towards various
CC applications including the use of peptides as preservatives in processed
CC foods either alone or in combination with antibacterial food additives
CC such as lysozymes; as a topical agent (Pseudomonas, Streptococcus and
CC to kill odour producing microbes (Micrococci). The present sequence is
CC Limulus polypheumus polypheumus-like peptide.
XX
XX Sequence 17 AA;
S0
AAE19471 Length: 17 August 28, 2003 06:59 Type: P Check: 1809
Found using 'seq14' (kam872.key)

1 |-----|
1 WCFAVCYRGCRRCRR
17
-- Search Statistics --
Times: CPU Total Elapsed
00:00:00.00 00:00:00.00
Number of sequences searched: 11
Number of sequence hits: 2
Number of separate matches: 2
Number of sequence hits saved: 0

! FINDPATTERNS on PIR:* allowing 0 mismatches

! 1 R(F,Y,W,A,L,I,V)WC(K,R,H)(K,R,H,F,Y,W)(K,R,H,CYRGFC(K,R,H)(K,R,H,F,Y,W)(F,Y,W

Databases searched:

NBRF, Release 76.1, Released on 12May2003, Formatted on 10Jun2003

Total finds: 0
Total length: 96,168,682
Total sequences: 283,308
CPU time: 02:52.77

! FINDPATTERNS on Swiss-Prot: * allowing 0 mismatches

! 1 R(F,Y,W,A,L,I,V)WC(K,R,H)(K,R,H,F,Y,W)(K,R,H,CYRGFC(K,R,H)(K,R,H,F,Y,W)(F,Y,W

Databases searched:

SWISS-PROT, Release 41.1, Released on 6Jun2003, Formatted on 9Jun2003

Total finds:	0
Total length:	47,026,705
Total sequences:	127,863
CPU time:	01:26.17

! FINDPATTERNS on sptrembl:* allowing 0 mismatches

! 1 R(F,Y,W,A,L,I,V)WC(K,R,H)(K,R,H,F,Y,W)(K,R,H,CYRGFC(K,R,H)(K,R,H,F,Y,W)(F,Y,W

Databases searched:

SPTREMBL, Release 23.0, Released on 4Mar2003, Formatted on 7Mar2003

Total finds:	0
Total length:	258,052,604
Total sequences:	830,525
CPU time:	08:15.75

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> 0 <
01 10 Intelligence
> 0 <

Quest - Quick User-directed Expression Search Tool
Release 5.4

-- Outline of search "seq18ags" --

Selected search type is key against sequence data banks or files.
Selected scope is Sequence.
Selected sequence key from "kam872.key":
seq18 (AA) ID seq18 AA preliminary pattern
1 followed by
2 rrwc
2 k or r or h
2 rvcy
2 f or y or w or a or l or i or v
2 gcyrkcr
2

Selected files:
File : kam872.pep

-- Output Parameters --

Format Options:
Nucleic acid code matching Exact Indirect file
Find non-matching hits only No Sequence or key file
Report key used Yes List of hits
Note position of hit Yes Hit display
Display full annotations Yes Name and annotations
Sequence context 50

NO
NO
Yes
Yes
Yes
Yes

-- Run Parameters --

Run mode Batch
Time to start comparison now
Notify at end of run No

-----
1 match found in sequence:
aael19479; Limulus polyphemus polyphephemusin-like peptide #10.
(from "kam872.pep")
TOIG of: aael19479 check: 3049 from: 1 to: 18

ID AAE19479 standard; peptide; 18 AA.
XX
AC AAE19479;
XX
DT 31-MAY-2002 (first entry)
XX
DE Limulus polyphemus polyphephemusin-like peptide #10.
XX
KW Polyphephemusin-like peptide; antimicrobial; sepsis-associated disorder;
human immunodeficiency virus 1; HIV-1; endotoxaemia; septic shock;
KW preservative; sterilant; food additive; topical agent.
XX
OS Limulus polyphemus.
XX
FH Key Location/Qualifiers
FT Modified-site 18
FT /note= "Amidated"
XX
XX WC200200687-A2.
XX
XX 03-JAN-2002.
XX
XX 27-JUN-2001; 2001WO-CA00918.
XX
XX 27-JUN-2000; 2000US-0604864.
XX
XX

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PA (UYBR-) UNIV BRITISH COLUMBIA.
XX
PI Hancock REW, Zhang L;
XX
DR WPI; 2002-226915/28.
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PT hairpin loop and antimicrobial activity useful to inhibit bacterial,
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CC growth of microbes such as gram positive (e.g., Staphylococcus aureus,
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CC such as human immunodeficiency virus (HIV)-1, vesicular stomatitis
CC virus, influenza A virus, herpes virus, hepatitis B virus, or hepatitis
CC C virus. Polyphephemusin-like peptides are also used to inhibit endotoxaemia
CC or sepsis-associated disorder (e.g., septic shock), as preservatives or
CC sterilants of materials susceptible to microbial or viral contamination,
CC as broad spectrum antimicrobial agent directed towards various
CC applications including the use of peptides as preservatives in processed
CC foods either alone or in combination with antibacterial food additives
CC such as lysozymes; as a topical agent (Pseudomonas, Streptococcus and
CC to kill odour producing microbes (Micrococci). The present sequence is
CC Limulus polyphephemusin-like peptide.
XX
SQ Sequence 18 AA;

AAE19479 Length: 18 August 28, 2003 07:00 Type: P Check: 3049 ..
Found using 'seq18' (kam872.key)

1 |-----|
1 RRCRRVCYAGFCYRKCR 18

-- Search Statistics --

Times: CPU 00:00:00.00 Total Elapsed 00:00:01.00
Number of sequences searched: 11
Number of sequence hits: 1
Number of separate matches: 1
Number of sequence hits saved: 0

```

! FINDPATTERNS on PIR:* allowing 0 mismatches

! 1.RRWC(K,R,H)RVCY(F,Y,W,A,L,I,V)GFCYRKCR

August 27

Databases searched:

NBRF, Release 76.1, Released on 12May2003, Formatted on 10Jun2003

Total finds: 0
Total length: 96,168,682
Total sequences: 283,308
CPU time: 02:08.60

! FINDPATTERNS on Swiss-Prot:* allowing 0 mismatches

! 1 RRWC(K,R,H)RVCY(F,Y,W,A,L,I,V)GFCYRKCR

August 27

Databases searched:

SWISS-PROT, Release 41.1, Released on 6Jun2003, Formatted on 9Jun2003

Total finds: 0

Total length: 47,026,705

Total sequences: 127,863

CPU time: 01:05.55

! FINDPATTERNS on sptrembl:* allowing 0 mismatches
! 1 RRC(K,R,H)RVCY(F,Y,W,A,L,I,V)GFCYRKCR

August 27

Databases searched:
SPTREMBL, Release 23.0, Released on 4Mar2003, Formatted on 7Mar2003

Total finds: 0
Total length: 258,052,604
Total sequences: 830,525
CPU time: 06:07.82


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> O <
> I O Intelligenetics
> O <

Quest - Quick User-directed Expression Search Tool
Release 5.4

-- Outline of search "seq19ags" --

Selected search type is key against sequence data banks or files.
Selected scope is Sequence.
Selected sequence key from "kam872.key":
seq19 (AA) ID seq19 AA preliminary pattern
1 followed by
2 rrwcfvryrg
2 k or r or n
2 fcykror

Selected files:
File : kam872.pep

-- Output Parameters --

Format Options:
Nucleic acid code matching Exact No
Find non-matching hits only No
Report key used Yes
List of hits Yes
Note position of hit Yes
Hit display Yes
Display full annotations Yes
Sequence context 50

-- Run Parameters --

Run mode Batch
Time to start comparison now
Notify at end of run No

-----
1 match found in sequence:
aael19480 : Limulus polyphemus polypeptidase-like peptide #11.
(from "kam872.pep")
TOIG of: aael19480 check: 4675 from: 1 to: 19

ID AAE19480 standard; peptide; 19 AA.
XX
AC AAE19480;
XX
DT 31-MAY-2002 (first entry)
XX
DE Limulus polyphemus polypeptidase-like peptide #11.
XX
KW Polypeptidase-like peptide; antimicrobial; sepsis-associated disorder;
KW human immunodeficiency virus 1; HIV-1; endotoxaemia; septic shock;
KW preservative; sterilant; food additive; topical agent.
XX
OS Limulus polyphemus.
XX
Key Location/Qualifiers
FH Disulfide-bond 4..18
FT Disulfide-bond 8..14
FT Modified-site 19
FT /note= "Amidated"
XX
PN WO200200687-A2.
XX
PD 03-JAN-2002.
XX
PF 27-JUN-2001; 2001WO-CA00918.
XX
PR 27-JUN-2000; 2000US-0604864.
XX
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XX (e.g., Escherichia coli, Pseudomonas aeruginosa, or Salmonella
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XX virus, Influenza A virus, herpes virus, hepatitis B virus, or hepatitis
XX C virus. Polypeptidase-like peptides are also used to inhibit endotoxaemia
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XX sterilants of materials susceptible to microbial or viral contamination,
XX as broad spectrum antimicrobial agent directed towards various
XX applications including the use of peptides as preservatives in processed
XX foods either alone or in combination with antibacterial food additives
XX such as lysozymes; as a topical agent (Pseudomonas, Streptococcus and
XX to kill odour producing microbes (Micrococci). The present sequence is
XX Limulus polypeptidase polypeptidase-like peptide.
XX
XX Sequence 19 AA;
SQ

AAE19480 Length: 19 August 28, 2003 07:00 Type: P Check: 4675
Found using 'seq19' (kam872.key)

1 |-----|
1 |RRWCFVRYRGRCYKRCR| 19

Times: CPU 00:00:00.00 Total Elapsed 00:00:00.00
Number of sequences searched: 11
Number of sequence hits: 1
Number of separate matches: 1
Number of sequence hits saved: 0

-- Search Statistics --
```

! FINDPATTERNS on PIR:* allowing 0 mismatches

! 1 RHWCFRCYRG(K,R,H)FCYRKCR

August 27, 2003 06:54

Databases searched:

NRBF, Release 76.1, Released on 12May2003, Formatted on 10Jun2003

Total finds: 0

Total length: 96,168,682

Total sequences: 283,308

CPU time: 01:57.78

! FINDPATTERNS on Swiss-Prot:* allowing 0 mismatches

! 1 RWCFCRYCYRG(K,R,H)FCYKCR August 27, 2003 06:55

Databases searched:

SWISS-PROT, Release 41.1, Released on 6Jun2003, Formatted on 9Jun2003

Total finds: 0
Total length: 47,026,705
Total sequences: 127,863
CPU time: 59.41

! FINDPATTERNS on sptrembl:* allowing 0 mismatches

! 1 RWCPCVCYRG(K,R,H)FCYRKR

August 27, 2003 06:48

Databases searched:

SPTREMBL, Release 23.0, Released on 4Mar2003, Formatted on 7Mar2003

Total finds: 0

Total length: 258,052,604

Total sequences: 830,525

CPU time: 05:50.99